NewsRelease

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TWO LANGLEY PROJECTS CHOSEN

NASA Will Study Ideas to Transform Earth Observations

NASA's New Millennium program has selected four concepts for further study as candidates for its Earth Observing 3 (EO-3) mission, technologies that could revolutionize space-based Earth observations, according to Dr. Ghassem Asrar, NASA's Associate Administrator for Earth Science. Each concept is designed to test innovative approaches for observing Earth's surface and atmosphere from positions outside of low-Earth orbits, with an emphasis on advanced measurement technologies.

The primary goal of the New Millennium program is to identify, develop and validate key instrument and spacecraft technologies that can lower cost and increase performance of science missions in the 21st century.

"The technologies under consideration by these missions will revolutionize space-based Earth observations, based on their unique spatial, spectral and temporal characteristics, and capture aspects of the Earth's dynamic atmosphere that have not been possible before," said Asrar.

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The selected concepts are:

- Geostationary imaging Fourier transform spectrometer, proposed by Dr. William L. Smith, chief of the Atmospheric Science Division at NASA's Langley Research Center, Hampton, VA, which will lead the study.

- Geostationary tropospheric trace gas imager, proposed by Dr. Jack Fishman, a member of the Atmospheric Science Division of the Langley Research Center. Dr. Fishman will work with Dr. James F. Gleason, a member of the Laboratory of Atmospheres at Goddard, with the Langley Research Center leading the study.

- Active large aperture optical systems to provide high resolution thermal imaging from geosynchronous orbit, proposed by Del Jenstrom, manager of Advanced Geosynchronous Studies at NASA's Goddard Space Flight Center, Greenbelt, MD, which will lead this study.

- Geostationary synthetic aperture microwave sounder, proposed by Dr. Bjorn Lambrigtsen, a senior member of the technical staff in the Earth and Planetary Atmospheres Research Element at NASA's Jet Propulsion Laboratory, Pasadena, CA, which will lead this study.

These concepts were selected from 24 proposals submitted in response to a NASA Research Announcement released in September 1997. The selection process included evaluations of each proposal by external science and technology peer reviewers, along with two panel sessions with leading NASA scientists and technologists to categorize each proposal.

Each of the concept providers is responsible for forming a team to conduct a six-month study effort, at the end of which they will each produce peer-reviewed study reports. At least one will be selected by the Office of Earth Science to enter the full implementation phase. Final selection is targeted for September 1999.

The first New Millennium program Earth-orbiting mission, Earth Observing-1 (EO-1), is scheduled for launch in December 1999. It will demonstrate an advanced land imager system and hyperspectral imaging technologies that may eventually replace the current measurement approach used by Landsat satellites. Further information about EO-1 is available at URL: http://eo1.gsfc.nasa.gov/NUwww/miscPages/home.html

Earth Observing-2 will fly an infrared laser in the cargo bay of the Space Shuttle to demonstrate the capabilities of a space-based lidar to accurately measure atmospheric winds from the Earth's surface to a height of about ten miles. This flight is scheduled for launch in early 2001. Details are available at URL: http://wwwghcc.msfc.nasa.gov/sparcle/

The New Millennium program is managed by NASA's Jet Propulsion Laboratory, for NASA's Office of Space Science and Office of Earth Science, Washington, DC. Further information about the New Millennium program is available at URL: http://nmp.jpl.nasa.gov/

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